

REMARKS

Claims 1-11, 13-29 and 33-34 are pending in this application. By this Amendment, claims 1-3, 5, 7-9, 11, 13, 19-20, 22-23, 26-39 and 33 are amended and claims 12 and 30-32 are canceled without prejudice or disclaimer. Various amendments are made for clarity and are unrelated to issues of patentability.

The Office Action rejects claims 1-12 under 35 U.S.C. §103(a) over U.S. Patent 6,314,466 to Agarawal et al. (hereafter Agarwal) in view of WO 03/028293 to Aksu et al. (hereafter Aksu). The Office Action also rejects claims 13-34 under 35 U.S.C. §103(a) over Agarwal in view of Aksu and further in view of U.S. Patent 6,738,980 to Lin et al. (hereafter Lin). The rejections are respectfully traversed with respect to the pending claims.

Independent claim 1 recites a memory to store content files received from a transmitting server, and a random access searching unit to search for a random access point in the memory, and the random access searching unit to transmit a content file request message to the transmitting server in response to the search in the memory determining that the random access point does not exist in the memory.

The applied references do not teach or suggest at least these features of independent claim 1. More specifically, Agarawal does not teach or suggest a random access searching unit to search for a random access point in the memory, and the random access searching unit to transmit a content file request message to the transmitting server in response to the search in the memory determining that the random access point does not exist in the memory. The Office Action (in the paragraphs bridging pages 6-7) states that Agarawal discloses that a client

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computer may require more data for the presentation than has been transferred by the server. The Office Action then states that this indicates that a determination is made whether a requested jump point is stored in a pre roll buffer or not. The Office Action appears to be relying on Agarawal's col. 3, lines 9-26, which represents problems of background/related art. The description in Agarawal's col. 3, lines 9-26 relates to problems that a user is attempting to overcome when using Agarawal's apparatus. This cited section does not correspond to the apparatus discussed in col. 8. Therefore, the statement that a client computer may require more data for a presentation than has been transmitted by the server does not teach or suggest the interpretation that is discussed on pages 6-7 of the Office Action.

Agarawal clearly describes operations in col. 8, lines 40-43. That is, Agarawal discloses that a client computer 112 may request transmission of a multimedia object 500. The user may be presented a text box in which a user may enter keystrokes of a frame number of a multimedia object. A data packet may then be transmitted (including a request for the frame-based multimedia object). The streaming media server 110 may receive the request and access the multimedia data object and transmit data corresponding to the specified segment of the multimedia object 504 to the client computer 112. See, in particular, Agarawal's col. 8, lines 40-61. This does not suggest transmitting a request message in response to a search determining that a random access point does not exist.

Agarawal does not teach or suggest that the random access searching unit to transmit a content file request message to the transmitting server in response to the search in the memory determining that the random access point does not exist in the memory. Agarawal does not

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suggest the determination of whether a random access point exists in a memory and/or a transmitting of a content file request message to a transmitting server in response to this determination.

Independent claim 1 also specifically relates to an HTTP based streaming apparatus. The Office Action states that Agarawal does not specifically disclose a network that is HTTP based. The Office Action then relies on Aksu as disclosing a HTTP video streaming network. However, there is no suggestion that Aksu's network may be combined with Agarawal. Rather, the Office Action relies on applicant's own disclosure in order to provide this combination.

For at least the reasons set forth above, Agarawal and Aksu do not teach or suggest all the features of independent claim 1. Lin does not teach or suggest the missing features of independent claim 1. Thus, independent claim 1 defines patentable subject matter.

Independent claim 7 recites requesting a random access point for a prescribed content by a user, determining whether the requested random access point is stored in a local memory, transmitting a content file request message to a transmitting server when the random access point is determined to not be stored in the local memory, and receiving a data stream from the transmitting server beginning from the random access point.

For at least similar reasons, the applied references do not teach or suggest at least these features of independent claim 7, which includes features from previous dependent claim 12. More specifically, Agarawal does not teach or suggest determining whether the requested random access point is stored in a local memory, and transmitting a content file request message to a transmitting server when the random access point is determined to not be stored in the local

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memory. The statements of Agarawal's col. 3, lines 9-26 may not be simply combined with the description at col. 8 of Agarawal. Agarawal and Aksu also do not teach or suggest a method of providing an HTTP based video stream.

For at least these reasons, Agarawal and Aksu do not teach or suggest all the features of independent claim 7. Lin does not teach or suggest the missing features of independent claim 7. Thus, independent claim 7 defines patentable subject matter.

Independent claim 22 recites receiving a random access request from a remote unit by a transmitting server, searching a random access point in a content file stored in the transmitting server in response to the transmitting server receiving the random access request, and reconfiguring a data stream according to a screen type of the random access point and a coincidence between the random access point and a data transmission starting point. Independent claim 22 also recites that reconfiguring the data stream comprises: searching an existing I-frame closest to the random access point when the random access point is determined to be a P-frame and is the data transmission starting point, converting the P-frame into a new I-frame by calculating values of the existing I-frame and a next P-frame, repeatedly performing the converting until the next P-frame is the random access point to convert the P-frame random access point into a final new I-frame, configuring the media data sample having the final new I-frame as the data transmission starting point, configuring the new data stream using the media data sample and the continuous media data samples, and changing a first header information of the new data stream. Independent claim 22 also recites transmitting the new data stream to the remote unit.

The applied references do not teach or suggest at least these features of independent claim 22, which includes features from previous dependent claim 30. More specifically, the applied references do not teach or suggest searching an existing I-frame closest to the random access point when the random access point is determined to be a P-frame and is the data transmission starting point, converting the P-frame into a new I-frame by calculating values of the existing I-frame and a next P-frame. The Office Action cites Lin's col. 6, lines 4-51 for these missing features. However, Lin does not teach or suggest converting the P-frame into a new I-frame by calculating values of the existing I-frame and a next P-frame. The other applied references do not teach or suggest these missing features of independent claim 22. Thus, independent claim 22 defines patentable subject matter.

Independent claim 33 recites searching an I-frame closest to a P-frame random access point requested by a user, converting a next P-frame that is adjacent to the I-frame into a new I-frame by calculating using the next P-frame and the I-frame, configuring a media data sample by setting the new I-frame as a data transmission starting point after converting the P-frame random access point into the new I-frame, and changing header information of the media data sample.

For at least similar reasons, the applied references do not teach or suggest at least these features of independent claim 33. More specifically, Lin does not teach or suggest converting a next P-frame that is adjacent to the I-frame into a new I-frame by calculating using the next P-frame and the I-frame. Lin's col. 6, lines 4-51 does not teach or suggest the claimed calculating.

The other applied references do not teach or suggest these missing features of independent claim 33. Thus, independent claim 33 defines patentable subject matter.

For at least the reasons set forth above, each of independent claims 1, 7, 22 and 33 defines patentable subject matter. Each of the dependent claims depends from one of the independent claims and therefore defines patentable subject matter at least for this reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-11, 13-30 and 33-34 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this,

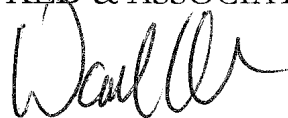
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concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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